

Table 4.12-2 Emergent and Submergent Plants Recommended for Stormwater Wetlands

Plant	Zone ¹	Form	Inundation Tolerance	Wildlife Value	Notes
Arrow Arum (<i>Peltandra virginica</i>)	2	Emergent	Up to 1 ft.	High; berries are eaten by wood ducks	Full sun to partial shade
Broad-Leaf Arrowhead (Duck Potato) (<i>Sagittaria latifolia</i>)	2	Emergent	Up to 1 ft.	Moderate; tubers and seeds eaten by ducks	Aggressive colonizer
Blueflag Iris* (<i>Iris versicolor</i>)	2, 3	Emergent	Up to 6 in.	Limited	Full sun (to flower) to partial shade
Broomsedge (<i>Andropogon virginianus</i>)	2, 3	Perimeter	Up to 3 in.	High; songbirds and browsers; winter food and cover	Tolerant of fluctuating water levels and partial shade
Bulltongue Arrowhead (<i>Sagittaria lancifolia</i>)	2, 3	Emergent	0-24 in	Waterfowl, small mammals	Full sun to partial shade
Burreed (<i>Sparganium americanum</i>)	2, 3	Emergent	0-6	Waterfowl, small mammals	Full sun to partial shade
Cardinal Flower * (<i>Lobelia cardinalis</i>)	3	Perimeter	Periodic inundation	Attracts hummingbirds	Full sun to partial shade
Common Rush (<i>Juncus sp.</i>)	2, 3	Emergent	Up to 12 in.	Moderate; small mammals, waterfowl, songbirds	Full sun to partial shade
Common Three Square (<i>Schoenoplectus americanus</i>)	2	Emergent	Up to 6 in.	High; seeds, cover, waterfowl, songbirds	Fast colonizer; can tolerate periods of dryness; full sun; high metal removal
Duckweed (<i>Lemna sp.</i>)	1, 2	Submergent / Emergent	Yes	High; food for waterfowl and fish	May biomagnify metals beyond concentrations found in the water
Joe Pye Weed (<i>Eutrochium purpureum</i>)	2, 3	Emergent	Drier than other Joe-Pye Weeds; dry to moist areas; periodic inundation	Butterflies, songbirds, insects	Tolerates all light conditions
Lizard's Tail (<i>Saururus cernuus</i>)	2	Emergent	Up to 1 ft.	Low; except for wood ducks	Rapid growth; shade-tolerant

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Marsh Hibiscus (<i>Hibiscus moscheutos</i>)	2, 3	Emergent	Up to 3 in.	Low; nectar	Full sun; can tolerate periodic dryness
Pickernelweed (<i>Pontederia cordata</i>)	2, 3	Emergent	Up to 1 ft.	Moderate; ducks, nectar for butterflies	Full sun to partial shade
Pond Weed (<i>Potamogeton pectinatus</i>)	1	Submergent	Yes	Extremely high; waterfowl, marsh and shore birds	Removes heavy metals from the water
Rice Cutgrass (<i>Leersia oryzoides</i>)	2, 3	Emergent	Up to 3 in.	High; food and cover	Prefers full sun, although tolerant of shade; shoreline stabilization
Sedges (<i>Carex sp.</i>)	2, 3	Emergent	Up to 3 in.	High; waterfowl, songbirds	Wetland and upland species
Softstem Bulrush (<i>Schoenoplectus tabernaemontani</i>)	2, 3	Emergent	Up to 2 ft.	Moderate; good cover and food	Full sun; aggressive colonizer; high pollutant removal
Swamp Smartweed (<i>Polygonum hydropiperoides</i>)	2	Emergent	Up to 1 ft.	High; waterfowl, songbirds; seeds and cover	Fast colonizer; avoid weedy aliens, such as <i>P. Perfoliatum</i>
Spatterdock (<i>Nuphar lutea</i>)	2	Emergent	Up to 1.5 ft.	Moderate for food, but High for cover	Fast colonizer; tolerant of varying water levels
Switchgrass (<i>Panicum virgatum</i>)	2, 3, 4	Perimeter	Up to 3 in.	High; seeds, cover; waterfowl, songbirds	Tolerates wet/dry conditions
Sweet Flag * (<i>Acorus calamus</i>)	2, 3	Perimeter	Up to 3 in.	Low; tolerant of dry periods	Tolerates acidic conditions; not a rapid colonizer
Waterweed (<i>Elodea canadensis</i>)	1	Submergent	Yes	Low	Good water oxygenator; high nutrient, copper, manganese and chromium removal

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Wild celery (<i>Vallisneria americana</i>)	1	Submergent	Yes	High; food for waterfowl; habitat for fish and invertebrates	Tolerant of murky water and high nutrient loads
Wild Rice (<i>Zizania aquatica</i>)	2	Emergent	Up to 1 ft.	High; food, birds	Prefers full sun
Woolgrass (<i>Scirpus cyperinus</i>)	3, 4	Emergent	yes	High: waterfowl, small mammals	Fresh tidal and nontidal, swamps, forested wetlands, meadows, ditches
¹ Zone 1: -6 to -12 OR -18 inches below the normal pool elevation Zone 2: -6 inches to the normal pool elevation Zone 3: From the normal pool elevation to +12 inches Zone 4: +12 to +36 inches; above ED zone (Aggressive colonizers are shown in bold type) *Not a major colonizer, but adds color					

Wetland Maintenance Criteria

Successful establishment of constructed wetland areas requires that the following tasks be undertaken in the first two years, at least twice after storm events that exceed ½ inch of rainfall.

- ✧ **Spot Reseeding.** Inspectors should look for bare or eroding areas in the contributing drainage area or around the wetland buffer, and make sure they are immediately stabilized with grass cover.
- ✧ **Watering.** Trees planted in the buffer and on wetland islands and peninsulas need watering during the first growing season. In general, consider watering every three days for first month, and then weekly during the first growing season (March - November), depending on rainfall. The total amount of water applied to the plants – including rainwater and irrigation – should be approximately 1 inch per week. Long, slow irrigation applications promote deep root growth essential for healthy plants; consider using drip irrigation where practical.
- ✧ **Reinforcement Plantings.** Regardless of the care taken during the initial planting of the wetland and buffer, it is probable that some areas will remain unvegetated and some species will not survive. Poor survival can result from many unforeseen factors, such as grazing by herbivores, poor quality plant stock, water level changes, drought. Thus, it is advisable to budget for an additional round of reinforcement planting after one or two growing seasons. Construction contracts should include a care and replacement warranty extending at least two growing seasons after initial planting to selectively replant portions of the wetland that fail to fill in or survive. If a minimum coverage of 50% is not achieved in the planted wetland zones after the second growing season, a reinforcement planting should be completed.

